

Unemployment Insurance and Consumer Credit

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Overview

- How does unemployment insurance affect consumer credit markets?
 - 1) Does the generosity of unemployment insurance (UI) affect households' ability to repay debt?
 - 2) Does UI generosity affect credit supply?

Unemployment Insurance

- Joint federal-state program, providing partial & temporary income replacement for laid-off workers
- Large and important transfer program - \$115 billion of benefits in 2011
- Benefits
 - Facilitates consumption smoothing (Gruber 1992)
 - Automatic stabilizer as part of fiscal policy
- Costs
 - Distortions to labor supply and hiring/firing decisions

Does UI improve ability to pay?

- UI replaces portion of lost income, so should improve ability to pay for laid off workers
- But is partial and temporary income replacement enough to affect mortgage delinquency?
- Furthermore, UI may increase incidence (Topel 1983) or duration of layoffs (Moffitt 1985, Meyer 1990) due to moral hazard

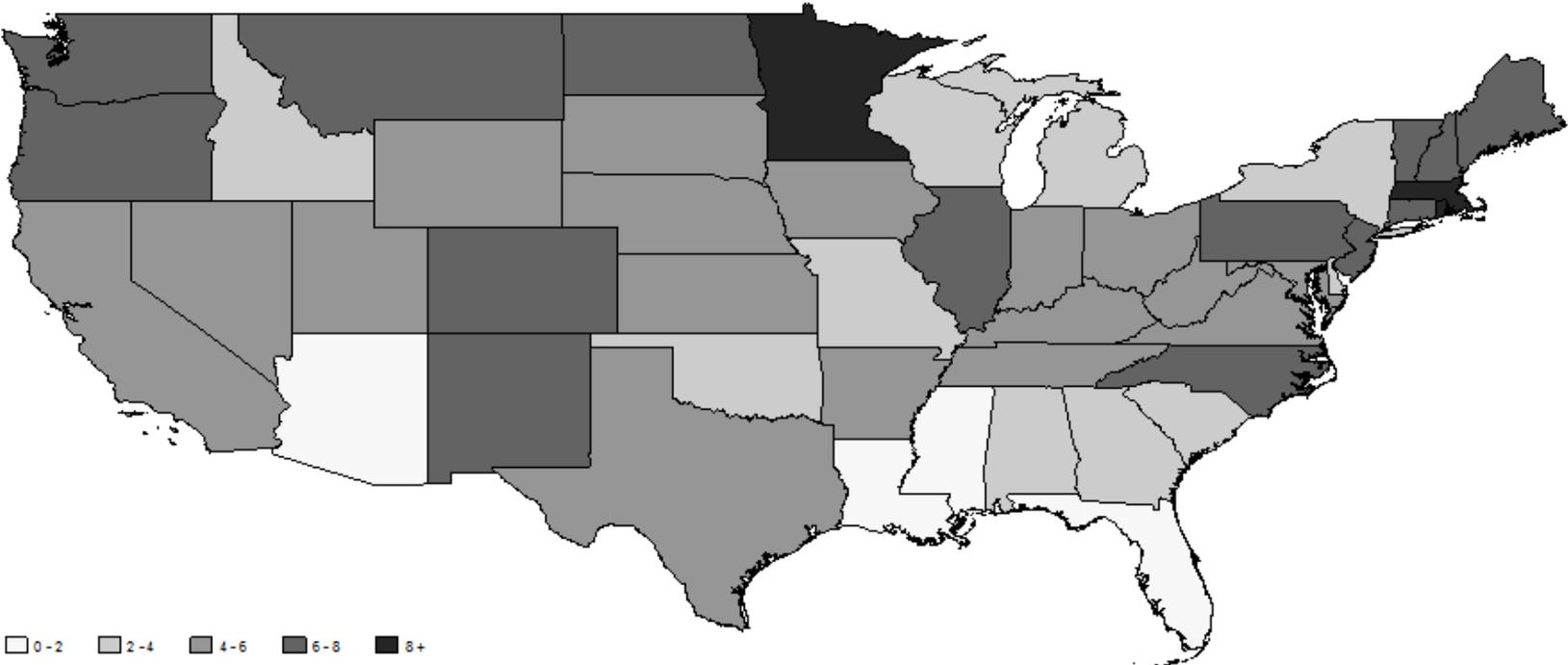
Research design

- Exploit variation in UI generosity across states and over time

1) Differences in “regular” UI benefit

- Duration: typically 26 weeks
- Weekly benefit: typically 50% of weekly earnings, subject to cap
- Max Benefit = max weekly benefit * max duration
 - Mean (std. dev): \$11,100 (\$3,600)
 - Low: \$6,100 (Mississippi)
 - High: \$28,100 (Massachusetts)

Changes, 1992 to 2011



Research design (cont'd)

2) Differences in “extended” benefits in 2009

- Substantial increase in duration of benefits, triggered by economic conditions

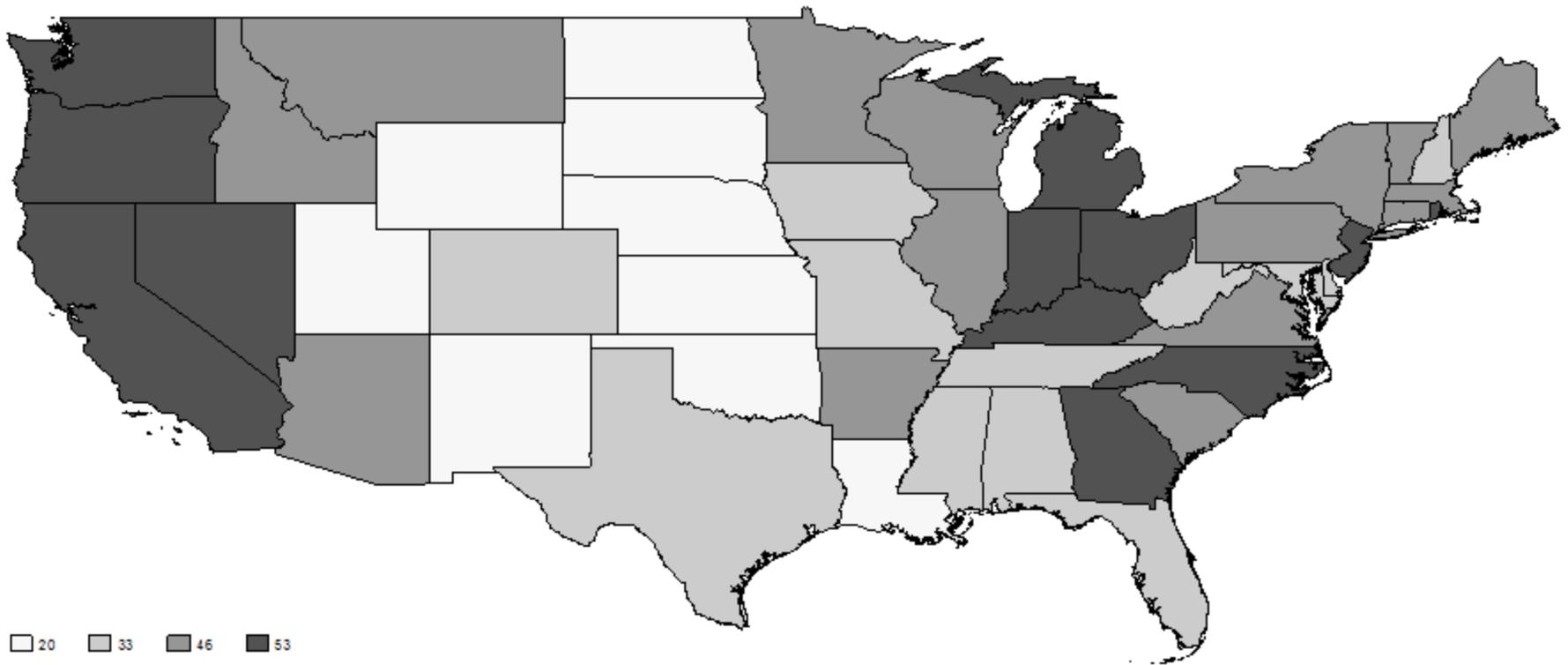
a) Extended benefits (EB) (6.5-8.0% unemployment trigger)

- Up to 20 additional weeks at state's payment terms
- 6.5% and 8.0% unemployment rate triggers

b) Emergency benefits (EUC) (6% unemployment trigger)

- Up to 33 weeks of extended benefits at state's payment terms
- 6% unemployment rate trigger

Weeks of extended benefits, 2009



Data – delinquency and default

- Survey of Income and Program Participation (SIPP)
 - Household survey collected by Census Bureau
 - 6 panels of respondents, covering 1991 through 2011
 - Roughly 35,000 households per year (10,000 to 15,000 mortgagors)
 - Mortgage delinquency and default at household level
 - Employment history, income, education, assets and mortgage leverage

Regression analysis

- Does mortgage delinquency vary with UI generosity?
 - Account for fixed differences across states
 - Account for state-level economic changes that might coincide with changes in UI generosity
 - Unemployment, wages, gdp, home prices, UI trust fund
 - Account for variation explained by household characteristics:
 - Education, earnings, net worth, mortgage leverage
- Do we see expected differences based on layoff status?

UI Regular Benefits

- UI benefits reduce delinquency among laid-off
- One standard deviation (\$3600) increase in Max Benefit mitigates 10% of layoff-related rise in delinquencies

Dependent variable:	Mortgage Delinquency	
Mean:	[5.4]	
Max Benefit	-0.11 (0.12)	-0.05 (0.13)
Max Benefit*Layoff		-0.23*** (0.07)
Layoff	6.10*** (0.38)	8.23*** (0.8)
Obs	64922	64922
R ²	0.05	0.05

Extended/Emergency Benefits

- UI generosity under EB/EUC also reduces delinquency, with similar magnitude to prior estimate

	Dependent variable: Mortgage Delinquency	
	Mean: [7.7]	
	<hr/> <hr/>	
Max Benefit EB/EUC*Layoff	-0.25*** (0.08)	-0.30*** (0.09)
Layoff	11.67*** (2.04)	39.94 (30.7)
Obs	64922	64922
R ²	0.05	0.05
Layoff X cubic in unemployment rat	N	Y

Heterogeneity by Savings

- Households with liquid savings should be less sensitive to partial and temporary income replacement provided by UI
- Interact layoff and max benefit with savings

SIPP results, savings

- Both Max Benefit and Max Benefit EB/EUC show much larger effects for HH with limited liquid assets

	Mortgage Delinquency			
Sample:	Liquid Assets < \$500		Liquid Assets ≥ \$500	
Max Benefit*Layoff	-0.51*		-0.03	
	(0.27)		(0.09)	
Max Benefit EB/EUC*Layoff		-0.64**		-0.11*
		(0.30)		(0.06)
Obs	15,624	3,384	49,298	9,218
R ²	0.07	0.08	0.04	0.06

UI payments and home equity

- Debate about causes of mortgage default
 - Affordability?
 - Negative equity and strategic default?
- Policy prescription varies
 - Strategic default -> reduce principal balance
 - Affordability -> reduce payment or increase income
- Do UI payments reduce default even among HHs with substantial negative equity?

UI effectiveness, by home equity

- UI benefits reduce delinquency substantially, even for those with negative equity and deep negative equity (LTV > 120%)

	Sample:	Mortgage Delinquency					
		Pos. Equity	Neg. Equity		Deep Neg. Equity		
Max Benefit*Layoff		-0.22*** (0.08)	-0.88** (0.38)	-1.27** (0.60)			
Max Benefit EB/EUC*Layoff		-0.23** (0.10)	-0.80*** (0.23)	-0.98*** (0.30)			
Obs		61,407	10,963	3,515	1,639	2,102	987
R ²		0.04	0.05	0.11	0.09	0.15	0.13

Does UI affect credit supply?

- From earlier results, increase in UI generosity reduces default rates among those laid off
- Repayment to lenders increases with UI generosity
- Do lenders pass along this benefit by increasing credit supply, i.e. by reducing interest rates or increasing credit limits?

Data on credit supply

- Survey of credit offers by mail (Intel Comperemedia)
 - Roughly 10,000 households annually, from 2000 to 2011
 - Interest rate and credit limit on credit card
 - Household demographics: income, education, family structure

Credit supply increases with UI

Max Benefit \uparrow \$3,600  interest rate \downarrow 0.2 p.p.
 credit limit \uparrow \$1,300

	Interest Rate Credit Cards	Credit Limit Credit Cards
Mean DV:	[11.55]	[36,860]
Max Benefit	-0.054*** (0.018)	362*** (107)
Obs	128,007	96,215
R ²	0.14	0.15
State FEs?	Y	Y
Year FEs?	Y	Y
State-year Controls?	Y	Y
Borrower Characteristics?	Y	Y

Credit supply, by income

- Effect of UI generosity strongest for low income HH

----- Income < \$35,000 ----- -- Income \$35,000-\$70,000 -- ---- Income > \$70,000 ----

Interest Rate Credit Limit Interest Rate Credit Limit Interest Rate Credit Limit
 Credit Cards Credit Cards Credit Cards Credit Cards Credit Cards Credit Cards

Max Benefit	-0.099** (0.033)	936*** (206)	-0.019 (0.022)	-29 (294)	-0.053 (0.032)	126 (175)
Obs	41,192	26,761	45,229	30,929	57,142	39,246
R ²	0.15	0.15	0.16	0.16	0.20	0.14

Conclusion

- Unemployment insurance has important effects on consumer credit markets
 - UI improves households ability to repay debt and avoid loan default, especially among households without buffer of savings
 - UI also improves credit supply, particularly for low income households
- Unemployment insurance as part of housing policy
 - There can be a social benefit from reducing mortgage default
 - HAMP program allocated \$75 billion, expected to disburse only \$16 billion (CBO, March 2012)
 - \$520 billion of UI payments disbursed 2008-2012 (CBO, November 2012)